

#### Supplementary Figure captions:

Supplementary Figure 1: FeO\*-MgO diagram characterizing basalts and basaltic andesites from volcanic sections of the Zambales ophiolite apart from Barlo (Coto volcanic section in Tarlac, Sual dikes north of Barlo, dikes in the Coto Block mantle section, and Subic dikes and pillow lavas in the south) as moderate-Fe tholeiites. Moderate and high-Fe boundaries after Pearce and Robinson (2010). Data sources: Zambales ophiolite dataset (Evans et al., 1991; Geary et al., 1989; Hawkins and Evans, 1983; Tamayo Jr., 2001; Yumul Jr., 1990).

Supplementary Figure 2: (a) Ti/V ratio histograms of proto-arc basalts, MORB and Coto Block volcanics (b) Primitive mantle normalized immobile element abundances of IBM proto-arc basalts (PAB) and Coto Block volcanics are similarly depleted compared to MORB. Data sources: IBM PAB (Haugen, 2017; Hickey-Vargas et al., 2018; Ishizuka et al., 2011, 2018; Reagan et al., 2010), MORB (Jenner and O'Neill, 2012), all MORB mean (Gale et al., 2013), Coto volcanic section (Geary et al., 1989) and Celebes Sea Basin (Spadea et al., 1996).